

DOCKET NO: UPVG0008-100 (UPVG-0191)
PATENT APPLICATION

Serial No.: 09/485,421
Filed: October 5, 2001

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Please cancel claims 1-11.

Claims 1-27 (canceled)

Claim 28 (previously presented) A conjugated composition comprising a nuclear localization sequence fragment of HIV-1 Vpr (SEQ ID NO:1) consisting essentially of amino acid sequence 17-36 and/or amino acid sequence 59-84 conjugated to a therapeutic compound, wherein said therapeutic compound is a nucleic acid molecule.

Claim 29 (previously presented) The conjugated composition of claim 28 wherein said nucleic acid molecule is a DNA vaccine plasmid conjugated to said fragment of HIV-1 Vpr by ionic bonds

Claim 30 (previously presented) The conjugated composition of claim 28 wherein said nucleic acid molecule is an antisense molecule.

Claim 31 (previously presented) The conjugated composition of claim 28 wherein said nucleic acid molecule is an antisense oligonucleotide.

Claim 32 (previously presented) A method of delivering a therapeutic compound to the nucleus of a cell comprising the step of:

contacting said cell with a conjugated compound, wherein said therapeutic compound is conjugated to a nuclear localization sequence fragment of HIV-1 Vpr protein (SEQ ID NO:1) consisting essentially of amino acid sequence 17-36 and/or amino acid sequence 59-84 of said HIV-1 Vpr protein; wherein said therapeutic compound is a nucleic acid molecule and wherein said conjugated compound is taken up by said cell and localized to the nucleus of said cell.

DOCKET NO: UPVG0008-100 (UPVG-0191)
PATENT APPLICATION**Serial No.: 09/485,421**
Filed: October 5, 2001

Claim 33 (previously presented) The method of claim 32 wherein said nucleic acid molecule is a DNA molecule.

Claim 34 (previously presented) The method of claim 32 wherein said nucleic acid molecule is a plasmid DNA molecule.

Claim 35 (previously presented) The method of claim 32 wherein said nucleic acid molecule is an antisense molecule.

Claim 36 (previously presented) The method of claim 32 wherein said nucleic acid molecule is an antisense oligonucleotide.

Claim 37 (previously presented) A conjugated composition comprising a nuclear localization sequence fragment of HIV-1 Vpr (SEQ ID NO:1) comprising amino acid sequence 17-36 and/or amino acid sequence 59-84 conjugated to a therapeutic compound, wherein said fragment of Vpr is less than 50 amino acids.

Claim 38 (previously presented) The conjugated composition of claim 37 wherein said fragment of HIV-1 Vpr further comprises a polycationic amino acid sequence.

Claim 39 (previously presented) The conjugated composition of claim 37 wherein said therapeutic compound is a DNA vaccine plasmid conjugated to said fragment of HIV-1 Vpr by ionic bonds

Claim 40 (previously presented) The conjugated composition of claim 37 wherein said fragment of HIV-1 Vpr further comprises a polycationic amino acid sequence and said therapeutic compound is a nucleic acid molecule conjugated to said polycationic amino acid sequence by ionic bonds.

Claim 41 (previously presented) The conjugated composition of claim 37 wherein said therapeutic compound is an antisense molecule.

DOCKET NO: UPVG0008-100 (UPVG-0191)
PATENT APPLICATION**Serial No.: 09/485,421**
Filed: October 5, 2001

Claim 42 (previously presented) The conjugated composition of claim 37 wherein said therapeutic compound is an antisense oligonucleotide.

Claim 43 (currently amended) A method of delivering a therapeutic compound to the nucleus of a cell comprising the step of:

contacting said cell with a conjugated compound, wherein said therapeutic compound is conjugated to a nuclear localization sequence fragment of HIV-1 Vpr protein (SEQ ID NO:1) comprising amino acid sequence 17-36 and/or amino acid sequence 59-84 of said HIV-1 Vpr protein; wherein said fragment of Vpr is less than 50 amino acid and wherein said conjugated compound is taken up by said cell and localized to the nucleus of said cell.

Claim 44 (previously presented) The method of claim 43 wherein said therapeutic compound is a DNA molecule.

Claim 45 (previously presented) The method of claim 43 wherein said therapeutic compound is a plasmid DNA molecule.

Claim 46 (previously presented) The method of claim 43 wherein said therapeutic compound is an antisense molecule.

Claim 47 (previously presented) The method of claim 43 wherein said therapeutic compound is an antisense oligonucleotide.